

REMARKS

Responsive to the Office action mailed April 5, 2011, which action was made final, applicant request entry of the foregoing amendments, consideration of the following remarks and reconsideration of the rejections set forth in said office action.

Claims 1, 8-11 were rejected under 35 USC 103(a) as being unpatentable over Ecsedy '062 in view of Rowland et al, US Patent 5,326,828 (herein after Rowland et al. '828). Applicant submits the neither Ecsedy '062 nor Rowland et al. '828, alone or in combination, render obvious the present invention.

Ecsedy '062 discloses a process for preparing chlorobutyl rubber compositions using para-tert butyl phenol disulfide curing agent containing more than 27% sulfur. Applicant submits that Ecsedy '062 fails to disclose or render obvious the use of the specific poly(alkylphenol) polysulfides in combination with unsubstituted urea in the vulcanization of EPDM type rubbers as claimed in the present invention. It was discovered that the combination of the present invention provided for a vulcanization process in which the production of undesirable nitrosamines was minimized and the "speed" of the process was acceptable.

Applicants submits that the disclosure of vulcanization process for chlorobutyl rubber with no mention of the accelerating effect of urea on specific poly(alkylphenol) polysulfide vulcanization agents and no mention of EPDM rubbers fails to render obvious the present invention. The examples in the present application evidence the unexpected "speed" of the specific combination of the present invention. Applicant submits that Ecsedy '062 fails to render obvious a vulcanization agent comprising a combination of specific poly(alkylphenol) polysulfides and urea in the vulcanization of EPDM type rubbers as CURRENTLY claimed in the present invention.

Rowland et al. '828 discloses a system which exhibits the advantages of using thiram disulfides accelerators while eliminating the generation of certain undesirable nitrosamines (see column 2, lines 26-28). The system disclosed uses TBTDS (tetrabenzyl thiram disulfide) in combination with urea and sulfur (see column 2, lines 28-31). Rowland et al. '828 discloses that each component of this unique package of TBTDS/Urea/Sulfur is critical. Applicant submits that were it obvious to combine the

teaching of Ecsedy '062 and Rowland et al. '828, which applicant submits is not the case, the combination system would include para-tert-butylphenol polysulfides together with an accelerator, from Ecsedy '062, and replacement of the TMTDS (according to Rowland et al. '828) with the unique package (TBTDS/urea/sulfur). Rowland et al. '828 fails to teach the used of unsubstituted urea alone but teaches that each of the components disclosed therein is critical, and that the combination is more efficient with TBTDS rather than TMTDS. Applicant submits that it is not obvious to combine the teachings in Ecsedy '062 with those of Rowland et al. '828 and were such a combination made, the specific combination as currently claimed in the present application is not rendered obvious.

Claims 1, 8-11 were rejected under 35 USC 103(a) as being unpatentable over Ecsedy '062 in view of Coran US 5,096,978 (herein after Coran '978). Applicant submits the neither Ecsedy '062 nor Coran '978, alone or in combination, render obvious the present invention as currently claimed.

As discussed above, Ecsedy '062 discloses a process for preparing chlorobutyl rubber compositions using para-tert butyl phenol disulfide curing agent containing more than 27% sulfur. Applicant submits that Ecsedy '062 fails to disclose or render obvious the use of the specific poly(alkylphenol) polysulfides in combination with unsubstituted urea in the vulcanization of EPDM type rubbers as claimed in the present invention. It was discovered that the combination of the present invention provided for a vulcanization process in which the production of undesirable nitrosamines was minimized and the "speed" of the process was acceptable.

Coran '978 discloses synthetic rubber compositions having improved properties of scorch delay and cure rate in which substituted urea coactivators are used in addition to commonly used accelerators. As set forth in the claims as currently amended and described at page 4, lines 27-29 of the present application, unsubstituted urea is preferred in the present invention. Applicants submit that were it obvious to combine Ecsedy et al. '062 with Coran '978, which applicants submit is not the case, the combination would not render obvious the specific poly(alkylphenol) polysulfides in combination with unsubstituted urea of the present invention.

In view of the foregoing remarks, applicant respectfully submits that claims 1, and 8-11 of the present application are in condition for allowance and prompt favorable action is solicited.

Respectfully submitted,

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